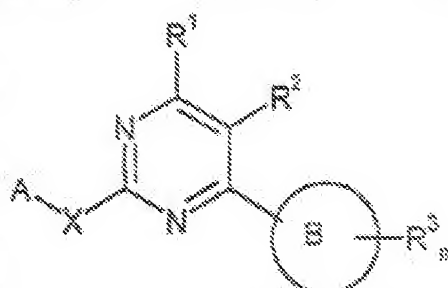


1999-581823/50 C02 AMCY 1998.03.06  
 AMERICAN CYANAMID CO \*DE 19909541-A1  
 1998.03.06 1998-036491(+1998US-036491) (1999.10.14) C07D  
 239/46, A01N 43/54, C07D 471/12, 487/12, 239/32  
 New pyrimidine derivatives useful as herbicides, especially for  
 selective weed control  
 C2000-106912  
 Addnl. Data: SCHEIBLICH S, MAIER T, KLEEMAN A,  
 BALTRUSCHAT H S  
 1999.03.04 1999DE 1609541

C(7-D12, 14-V2) .2



(I)

**NOVELTY**

2-Aryloxy- or 2-arythio-6-aryl-pyrimidine derivatives (I) are new.

**DETAILED DESCRIPTION**

2-Aryloxy- or 2-arythio-6-aryl-pyrimidine derivatives of formula (I) are new.

A = optionally substituted aryl, optionally substituted 5- or 6-membered heteroaryl or difluorobenzodioxonyl;  
 B = phenyl or thienyl;  
 m = 0-5;  
 R<sup>1</sup> = halogen, CN or optionally substituted alkyl, alkenyl, alkynyl, alkoxyalkyl, haloalkyl, alkoxy, haloalkoxy, alkylthio, alkylamino or dialkylamino;  
 R<sup>2</sup> = H, halogen, CN or optionally substituted alkyl, alkoxy, haloalkyl  
 [DE 19909541-A+]

or haloalkoxy;  
 R<sup>2</sup> = halogen, NO<sub>2</sub>, CN, haloalkyl, haloalkoxy, haloalkylthio, SF<sub>5</sub>, or optionally substituted alkyl, alkenyl, alkynyl, alkoxy, alkoxyalkyl, alkoxyalkoxy, alkylthio, alkylsulfinyl or alkylsulfonyl;  
 X = O or S.

**ACTIVITY**

Herbicidal. In a pre-emergence test, 2-(2-chloro-4-pyridyloxy)-6-methyl-4-(4-trifluoromethylphenyl)-pyrimidine at an application rate of 0.4 kg/ha gave 100% control of poppy (*Papaver rhoeas*) and 91-99% control of chickweed (*Stellaria media*).

**MECHANISM OF ACTION**

None given.

**USE**

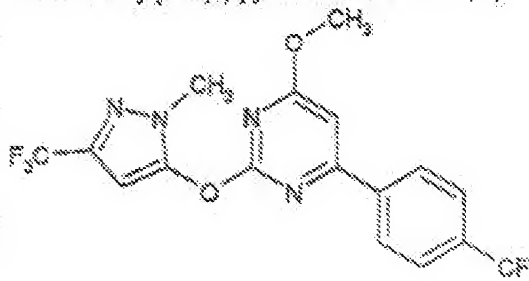
(I) are herbicides useful for selective weed control, e.g. for pre-emergence weed control in winter wheat, maize, soya, cotton or rice, or post-emergence weed control in winter wheat or maize.

**ADVANTAGE**

(I) have good selectivity and biodegradability. In a pre-emergence test, 2-(2-chloro-4-pyridyloxy)-6-methyl-4-(4-trifluoromethylphenyl)-pyrimidine at an application rate of 0.4 kg/ha caused no damage to winter wheat, maize, soya, cotton or rice.

**SPECIFIC COMPOUNDS**

9 Compounds (I) are specifically claimed, e.g. 4-methoxy-2-(1-methyl-3-trifluoromethyl-5-pyrazolyloxy)-6-(4-trifluoromethylphenyl)-pyrimidine of formula (Ia).



(Ia)

[DE 19909541-A+1]

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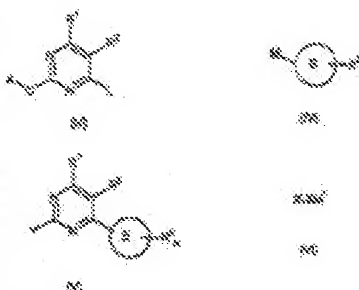
**EXAMPLE**

A mixture of 4-methyl-2-methylsulfonyl-6-(4-trifluoromethylphenyl)-pyrimidine (0.32 g), 3-trifluoromethylphenol (0.18 g), potassium carbonate (0.25 g) and acetonitrile (25 ml) was refluxed for 4 hours, diluted with water and extracted with methyl acetate to give 4-methyl-2-(3-trifluoromethylphenyl)-6-(4-trifluoromethylphenyl)-pyrimidine (0.39 g), m.pt. 124-127°C.

**TECHNOLOGY FOCUS**

Organic Chemistry - Preparation: (I) is prepared by:

- (1) reacting a compound of formula (III) with a metal compound of formula (IV) and oxidizing the product when L is hydrogen; or
- (2) reacting a compound of formula (V) with a compound of formula (VI).



L = H or a leaving group;  
 M = Li, Mg, Zn, B or Sn;  
 Y = a leaving group; and  
 M' = H or metal.  
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[DE 19909541-A/2]